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REMARKS

Claims 1, 2 and 4-11 are pending and under consideration. Claims 2 and 4 have been amended as described herein. Support for the amendments can be found throughout the specification and claims as originally filed and there is no new matter added as a consequence of the amendments to the claims.

Allowable Claims

The Examiner has indicated that claim 1 is allowable.

The Rejections under 35 U.S.C. § 112, ¶1 Should Be Withdrawn

The Examiner has rejected claims 2 and 4-11 as failing to comply with the written description requirement under 35 U.S.C. § 112, first paragraph. The Examiner alleges that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

With regard to claim 2, the Examiner states that the specification supports the disclosure of an isolated nucleic acid comprising the cDNA molecule encoding an Mda-5 polypeptide having the sequence of SEQ ID NO:2, but does not expressly include the genomic sequence. Since claim 2 is drawn to a nucleic acid encoding an Mda-5 polypeptide, which encompasses both cDNA and genomic DNA encoding Mda-5 protein, the Examiner alleges that the specification fails to describe the claimed invention by their complete structure or other identifying characteristics.

In response, claim 2 has been amended to recite an isolated nucleic acid comprising a

cDNA sequence encoding an Mda-5 polypeptide having the sequence of SEQ ID NO:2. As indicated by the Examiner, the specification provides express support for a cDNA sequence encoding Mda-5. Therefore, Applicants submit that the subject matter of claim 2, as amended, is described in the specification in such a way as to reasonably convey to one of skill in the art that the inventors, at the time the application was filed, had possession of the claimed invention.

In addition, the Examiner states that claim 4 encompasses a large genus of nucleic acids of various sizes that hybridize to DNA of SEQ ID NO:1 or its complementary strand. The Examiner alleges that such nucleic acids range from oligonucleotides to large sizes of DNA depending of the stringency of the hybridizing condition. The Examiner also notes that claim 4 recites a nucleic acid encoding a polypeptide having growth suppressive activity, but alleges that the specification fails to describe any nucleic acid that is hybridizable to SEQ ID NO:1 and has this function. The Examiner alleges that it is unclear what structural requirement is necessary for growth suppressive activity and the specification fails to describe a representative number of species of the invention by their complete structure or other identifying characteristics.

In response, Applicants have amended claim 4 to recite "stringent hybridization conditions" under which the nucleic acid would hybridize to the DNA of SEQ ID NO:1, as supported by the specification at page 27, line 28 through page 28, line 6, which references Sambrook et al. (Sambrook, Fritsch & Maniatis, Molecular Cloning: A Laboratory Manual, 1989, Second Edition), and is incorporated by reference in the present specification at page 1, lines 14-24. A copy of the cited disclosure is attached herein as Exhibit 1. Also, the Examiner's attention is invited to the instant specification at page 33, lines 3-5, which relates to a "functionally equivalent" Mda-5 cDNA that encodes "a protein which retains substantially the same biological functions which are characteristic of Mda-5." Therefore, Applicants submit that

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the subject matter of claim 4, as amended, is described in the specification in such a way as to reasonably convey to one of skill in the art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicants submit that claims 5-11 depend from allowable claims 1, 2 and 4 and, therefore, are also allowable.

For the foregoing reasons, Applicants submit that claims 2 and 4-11 are patentable under 35 U.S.C. § 112, first paragraph, and request the withdrawal of the rejection.

CONCLUSION

Based on the foregoing remarks and in light of the amendments, Applicants submit that the present application is in condition for allowance. A Notice of Allowance is therefore respectfully requested.

Applicants request a one month extension of time and encloses herewith the requisite fee as set forth in 37 C.F.R. § 1.17(a)(1). Applicants do not believe that any additional fee is required in connection with the submission of this document. However, should any fee be required, or if any overpayment has been made, the Commissioner is hereby authorized to charge any fees, or credit or any overpayments made, to Deposit Account 02-4377. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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